UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,458	04/22/2004	Joseph H. Forrester	5420	6430

26936 7590 01/10/2006

SHOEMAKER AND MATTARE, LTD
10 POST OFFICE ROAD - SUITE 110
SILVER SPRING, MD 20910

EXAMINER	
PEACE, RHONDA S	

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/829,458	FORRESTER, JOSEPH H.	
	Examiner	Art Unit	
	Rhonda S. Peace	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/22/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Forrester et al (US 6311006).

With regard to claim 6, Forrester et al discloses a method of suspending cable comprising the steps of:

- Suspending a cable closure 70' from the cable in the vicinity of a selected pole (8:4-9, Figure 10).
- Suspending from the cable bend radius protector 40', having a grooved periphery of a radius at least as great as the minimum bend radius, from the cable at a point on the cable further from the pole than the cable closure 70' (6:51-67, 7:1-11, Figure 10).
- Passing the cable around the periphery of the bend radius protector 40', and then back towards the pole (7:44-55).
- Clamping the cable to the pole (6:51-67, 7:1-11).

Further pertaining to claim 6, it has been held that to be entitled to weight in method claims, the recited structure limitations (in the present case, the limitation that

the cable suspended is of a type "comprising a pair of tensile members and an optical fiber there between") must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure (*Ex parte Pfeiffer*, 1962 C.D. 408 (1961)). For this reason, the type of cable suspended introduced in the preamble of claim 6 has not been given patentable weight.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forrester et al (US 6311006).

Pertaining to claim 3, Forrester et al discloses a cable fixture system comprising a pair of bend radius protectors **40**, each having a grooved periphery of a radius at least as great as the minimum bend radius of the cable (Figure 9, column 5 lines 26-41,

hereafter indicated as 5:26-41), as well as means **60** and **62** to suspending each protector 40 from the cable (Figures 7 and 9, 5:20-25). The protector **40** must not have a radius smaller than the minimum band radius of the specified cable, as this will cause the cable to bend too sharply, thereby causing damage to the cable and resulting in optical loss (1:20-32).

Further addressing claim 3, the recitation that the cable support system of claim 3 is for supporting an "optic drop wire of the type comprising a pair of tensile members and a optical fiber there between" is not given patentable weight, as it has been held that a preamble is denied the effect of a limitation where the claim is draw to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause (*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)). Moreover, while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure, rather than function (In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). Apparatus claims cover what a device is, and not what a device does (*Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). For these reasons, in the consideration of prior art, the examiner does not consider the *type of cable* suspended from the apparatus to be of patentable weight.

With regard to the specified bend radius of the protector specified within claim 3, the applicant has specified the bend radius is to be "at least as great as the minimum drop wire bend radius but less than the fiber optic cable bend radius." Forrester et al

discloses a cable fixture system comprising a pair of bend radius protectors **40**, each having a grooved of a radius at least as great as the minimum bend radius of the cable, and does not disclose the protector **40** having a bend radius at least as great as the minimum drop wire bend radius *but less than the fiber optic cable bend radius*. However, it would have been obvious to one having ordinary skill in the art to create a protector having a bend radius less than the fiber optical cable bend radius, since it has been held that where general conditions of a claim are disclosed in the prior art (that the bend radius must not be smaller than the minimum band radius of the cable being suspended, as cited above), discovering the workable ranges involves only routine skill in the art (*In re Aller*, 105 USPQ 233).

Addressing claim 5, Forrester et al further discloses a clamp that clamps a splice closure 70 to a dead end pole 12 (Figure 9, 7:17-21).

With regard to claim 7, Forrester et al discloses a method of supporting a cable comprising the steps of:

- Suspending a cable closure **70** from the cable in the vicinity of a selected pole (8:4-9, Figure 9).
- Suspending from the cable a pair of bend radius protectors **40**, each having a grooved periphery of a radius at least as great as the minimum bend radius, such that the protectors **40** straddle the closure **70** (6:51-67, 7:1-11, Figure 10).

- Passing the cable around the periphery of the first bend radius protector **40**, and then around the periphery of the second bend protector **40**, and then back to the pole (7:44-55).
- Clamping the cable to the pole (6:51-67, 7:1-11).

However, Forrester et al does not disclose orientating the protectors **40** and closure **70** such that one bend radius protector is closer to the pole than the cable closure. (Note, this would involve merely shifting the orientation of Forrester et al further down the cable.) It would have been obvious to create an orientation such that one bend radius protector is closer to the pole than the cable closure, as this would allow the cable closure, or splice box, to be orientated so that the cable could be spliced away from the pole, thereby increasing the areas to which the cable could be dropped. Furthermore, it would have been an obvious matter of design choice to position one bend radius protector is closer to the pole than the cable closure, as the applicant has not disclosed that placing one bend radius protector is closer to the pole than the cable closure solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well (i.e. support the cable with the same level of efficiency) with the bend protectors orientated so that they straddle the selected pole.

Further pertaining to claim 7, it has been held that to be entitled to weight in method claims, the recited structure limitations (in the present case, the limitation that the cable suspended is of a type "comprising a pair of tensile members and an optical fiber there between") must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure (*Ex parte Pfeiffer*, 1962

C.D. 408 (1961)). For this reason, the type of cable suspended introduced in the preamble of claim 6 has not been given patentable weight.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Forrester et al (US 6311006) in further view of McCord in his article "Implications of the New Fiber-Optic Bend Radius Standard in Cabling," published October 1, 2000.

With respect to claim 4, Forrester et al discloses the device as outlined above. As before, the protector **40** must not have a radius smaller than the minimum band radius of the specified cable, as this will cause the cable to bend too sharply, thereby causing damage to the cable and resulting in optical loss (1:20-32). However, Forrester et al does not disclose a specific radius, or range of radii, for the protector **40**, such as the protector does not have a radius greater than three inches. McCord discloses a new bend radius standard ANSI/TIA/EIA-568B.3 whereby all fiber optical cables are now subject to uniform standards, including the bend radius standard, which was previously at the discretion of the manufacturer. This new standard requires that all cable have a 1 inch bend radius when under no pull load, and a minimum 2 inch radius when the cable is subject to tensile loading up to the rated limit. It would have been obvious to one of ordinary skill in the art to create a protector with a radius not exceeding three inches, as new standards have allowed protectors to become as small as 1 inch in radius, thereby allowing for the manufacture of smaller components, which are easier to install in the field. Moreover, it would have been obvious to one having ordinary skill in the art to create a protector having a bend radius less than or equal to

three inches, since it has been held that where general conditions of a claim are disclosed in the prior art (that the bend radius must not be smaller than the minimum band radius of the cable being suspended, as cited above, and therefore is not subjected to an upper radius limit), discovering the workable ranges involves only routine skill in the art (*In re Aller*, 105 USPQ 233).

Response to Arguments

Applicant's arguments with respect to *claims 3-7* have been considered but are moot in view of the new ground(s) of rejection set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda S. Peace whose telephone number is (571) 272-8580. The examiner can normally be reached on M-F (8-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272- 2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rhonda S. Peace
Examiner
Art Unit 2874

MICHELLE CONNELLY-CUSHWA
PRIMARY EXAMINER
1/6/06